CDF Operations Report

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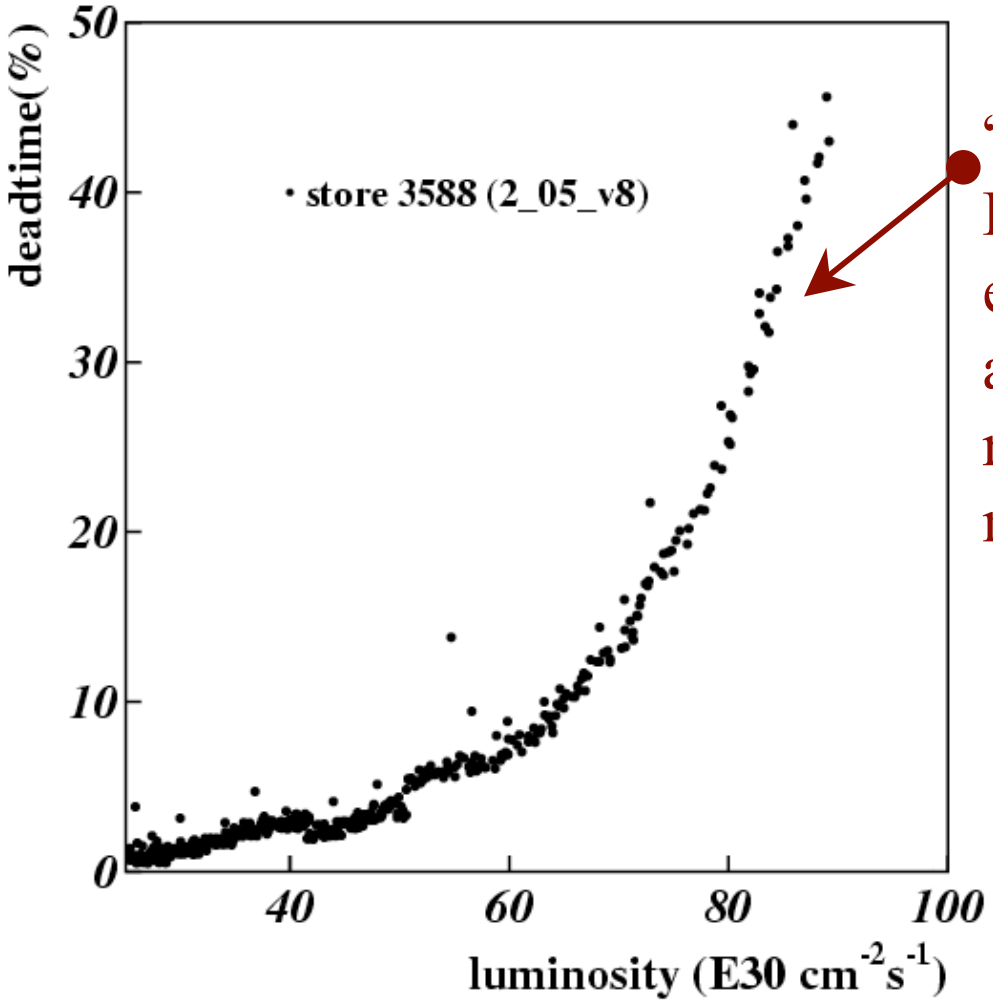
June 28, 2004

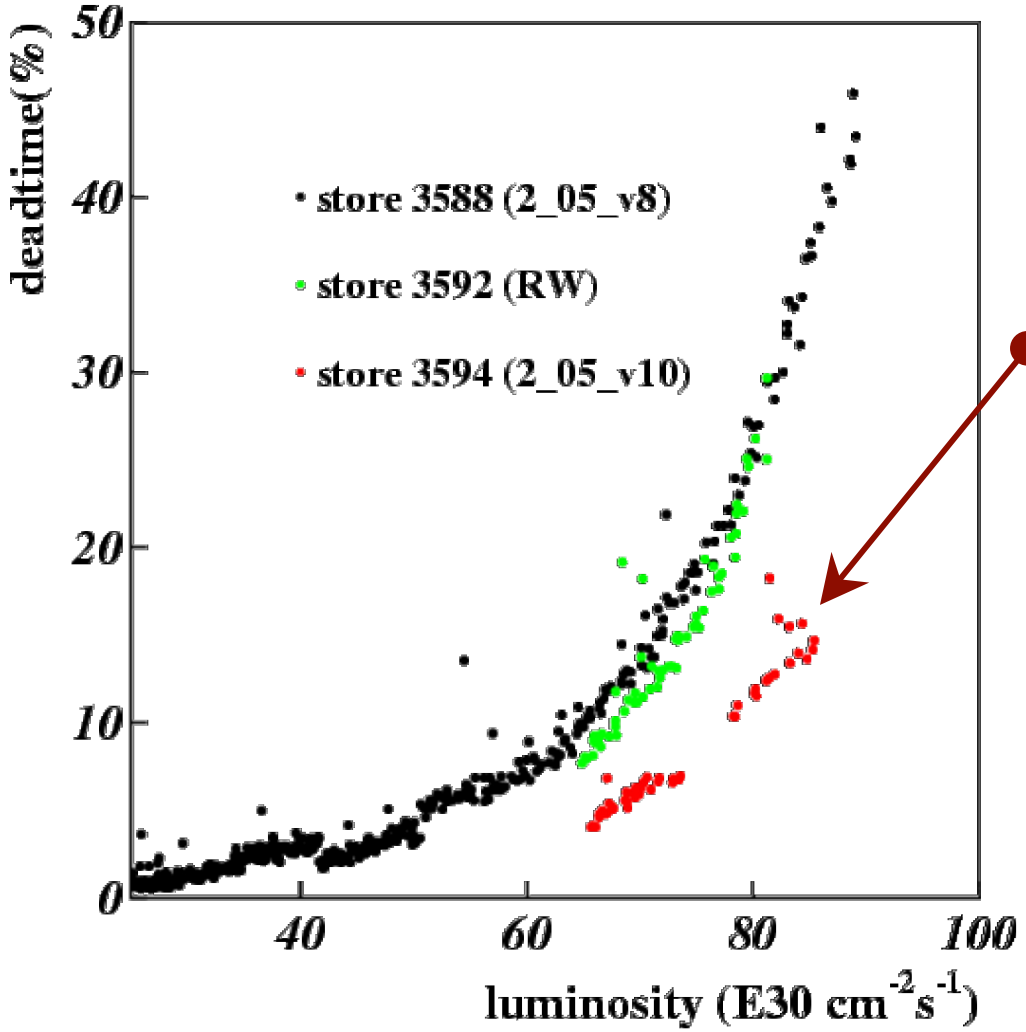
All Experimenters Meeting

Deadtime



"Hitting the wall": Both the rate at which events are assembled and the data logging rate are at their maxima.

Deadtime Reduction

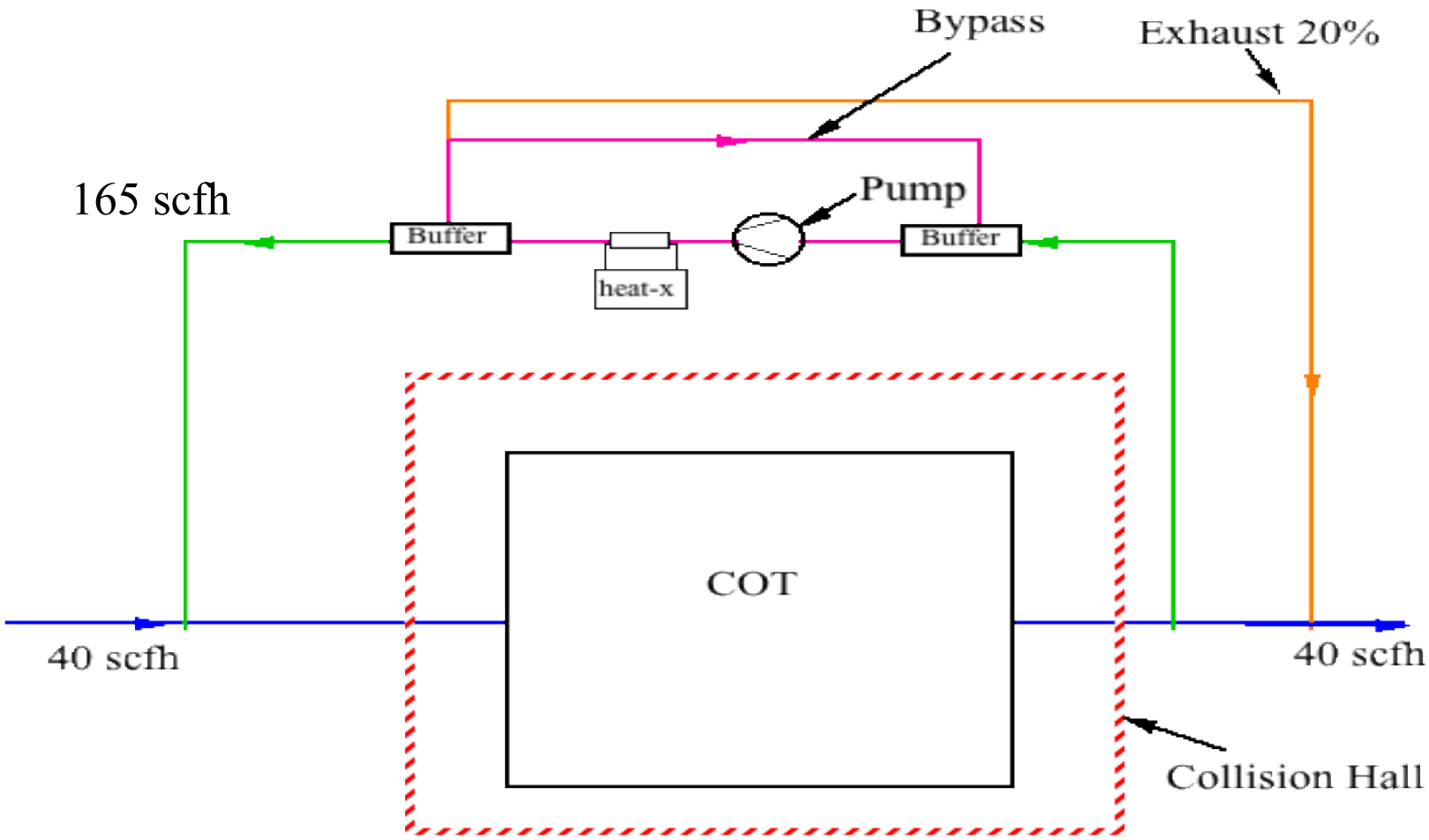


Implemented changes to the trigger table, significantly reducing the deadtime at high luminosity.

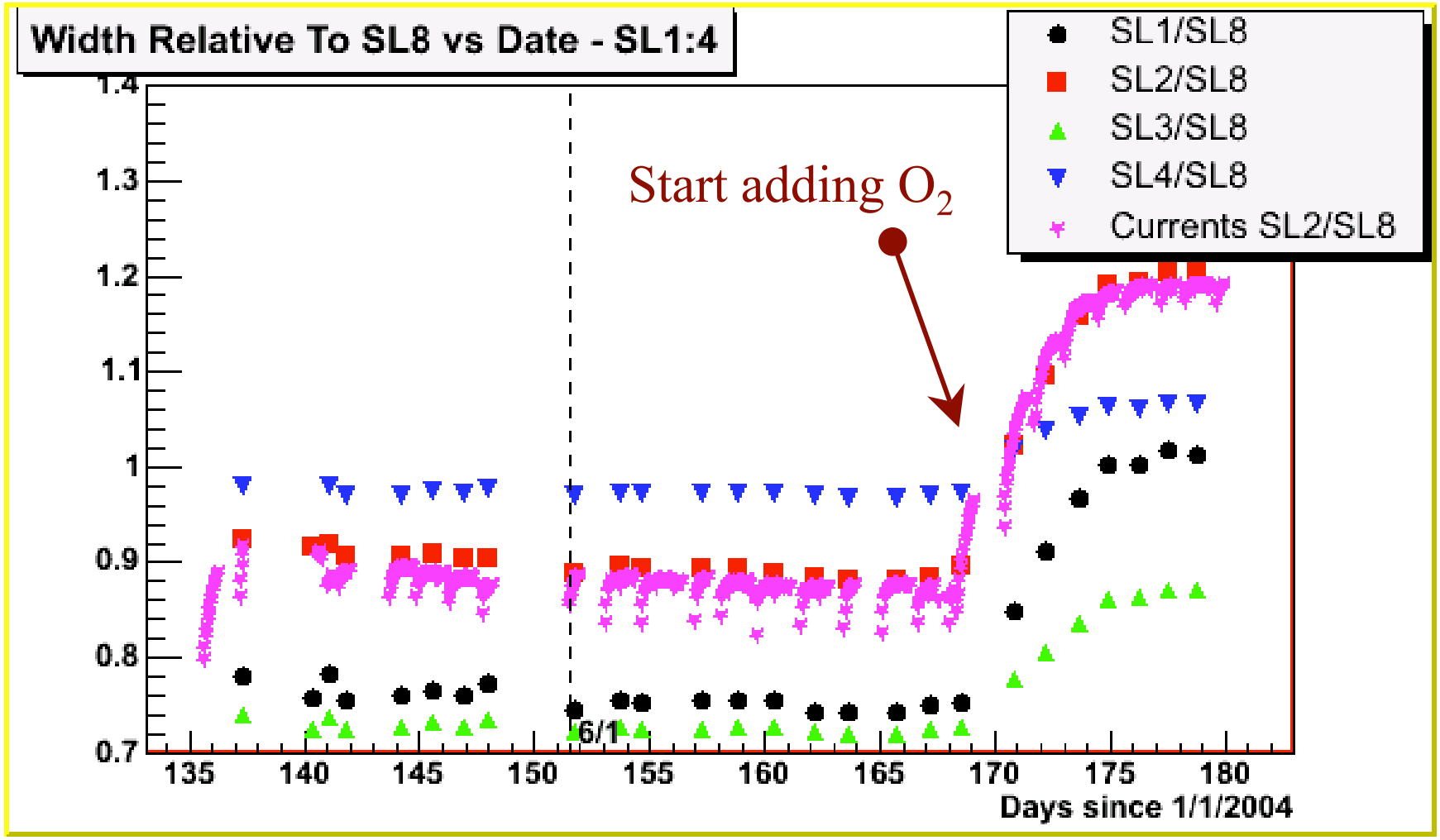
This Week's Stores

Date	Store	Inst Lum (initial)	Delivered Lum [nb^{-1}]	Lum to tape nb^{-1} (ε)	Comment
Mo 6/21	3586	89.5e30	3676	2676 (73%)	**b0cmp00**
Tu 6/22	3588	91.8e30	3334	2853 (83%)	**Road warrior**
We 6/23	3589	89.2e30	3656	2899 (79%)	**PSMX, 2 Si trips**
Fr 6/25	3592	90.6e30	2694	2042 (76%)	**CHL, quench**
Sa 6/26	3594	88.5e30	3527	2646 (75%)	**pulsar**
Su 6/27	3596	78.5e30	1832 (1527)	1436 (78%) (94%)	**LOSTP, Earthquake**
Total			18719	14552 (78%)	

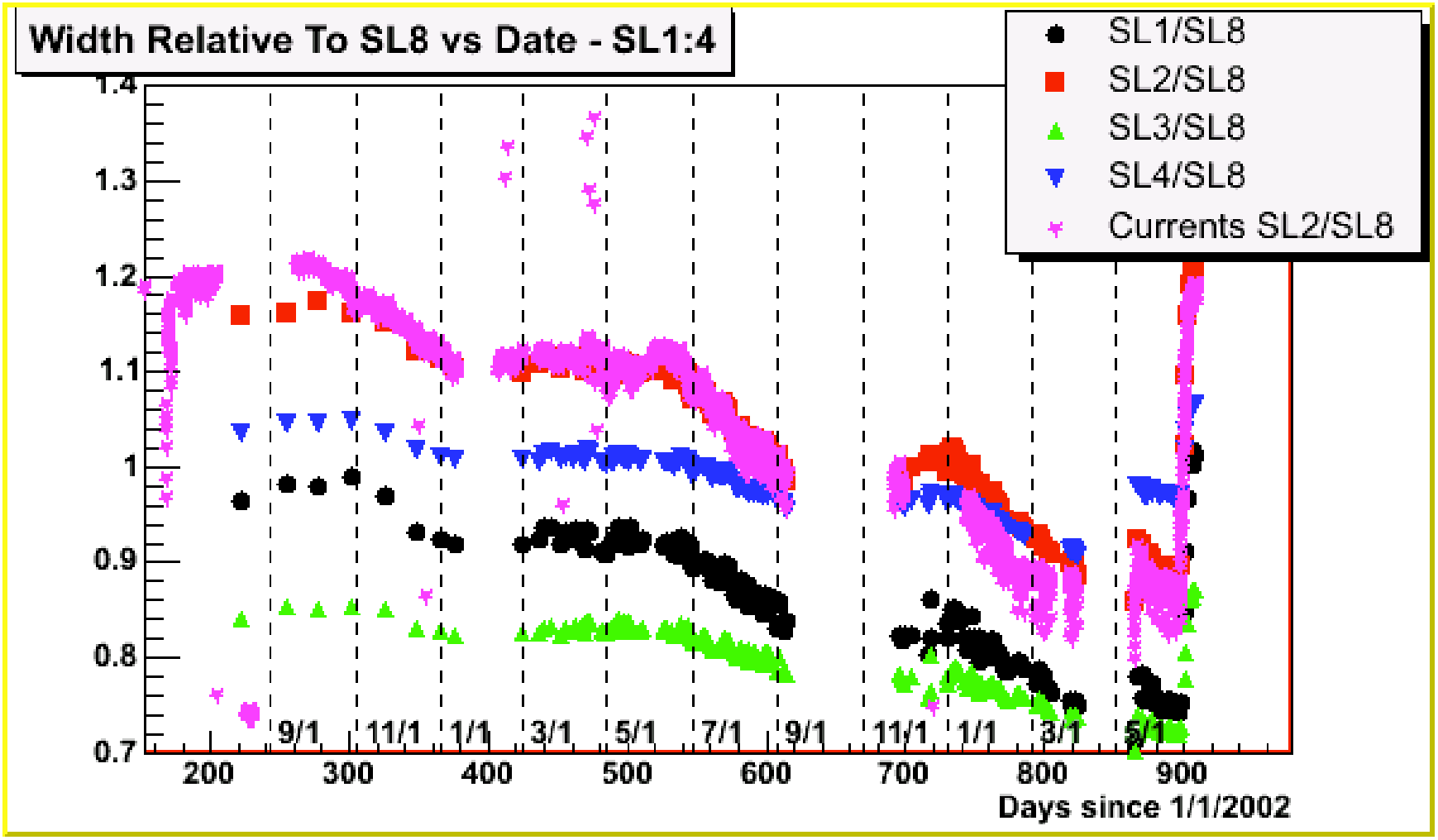
COT Gas Recirculation



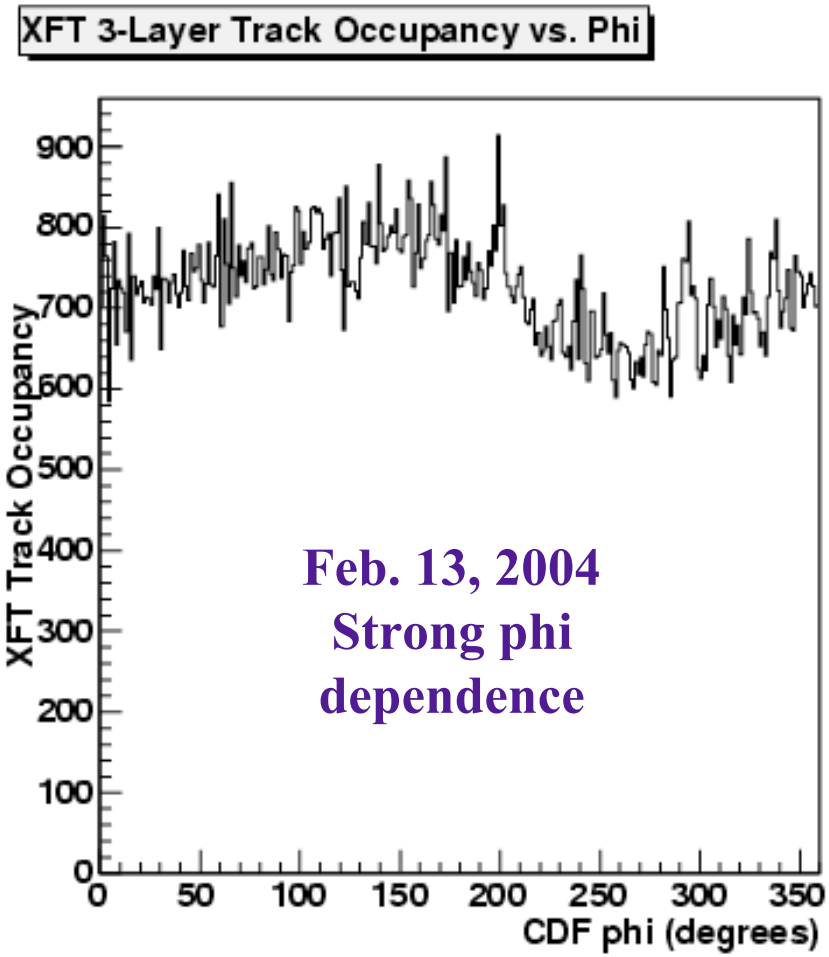
COT Recovery

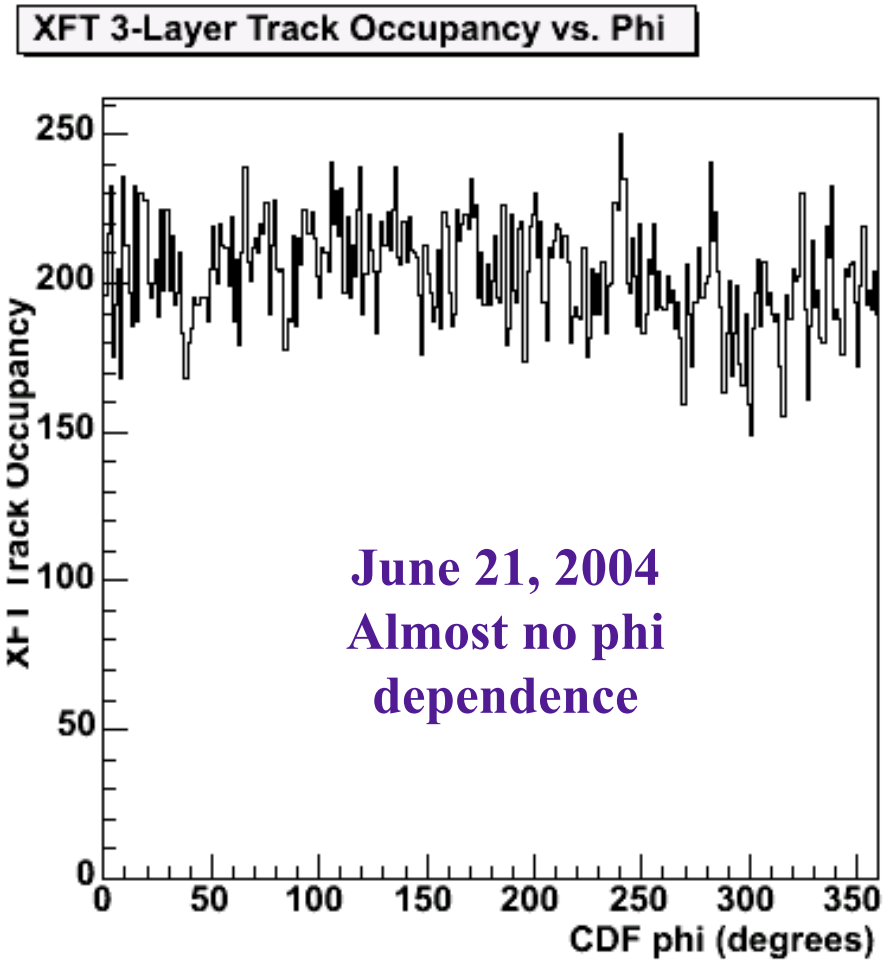


COT Back to 2002 Gain!



Track Finding vs. phi





Other Work

- Accesses:
  - Went in twice to work on CMX muon chambers
  - Moved Bonner spheres back in the hall to complete neutron flux measurements.
- We are analyzing the results of the beam aborts with elevated abort gap levels performed last week.
  - Thanks to the AD for providing us with this very helpful information.
  - We will report on the results when the analysis is ready.

Summary

- The pulse widths and currents in the COT are back to their 2002 levels!
- We are focused much more on efficiency now.
- The luminosity has reached a level where simple trigger improvements no longer keep up:
  - Event builder and data logger are at their limits
  - We have significantly reduced deadtime:
    - cut harder to improve purity,
    - dynamically prescale more triggers, or
    - apply a fixed prescale.
- This was a record week for CDF!